APPENDIX 8: DEVELOPING ESTIMATES OF COST TO MEET WASHINGTON'S PUBLIC HEALTH STANDARDS

What would it take to protect the public's health according to the public health standards?

To provide public health protection by meeting the public health standards 95% of the time, Washington's governmental public health system would need a sustained annual investment of about $400 million in addition to current resources.

- This total includes an additional investment of $14.5 million toward Department of Health (DOH) efforts to provide public health protection. The larger proportion of this estimate would be focused on ensuring assessment skills and tools are in place, that program evaluations are conducted, and for health promotion activities.
- The total also includes $385 million above current public health capacity for 35 LHJs to meet the standards at 95% capacity.

Background

The *Standards for Public Health in Washington State* describe what public health professionals believe everyone has a right to expect of the governmental public health system. The standards were developed jointly by state and local public health officials and field-tested over time. A 2002 baseline measured the capability of the state agency and the 35 local public health agencies to meet the standards; the study shows how far the partners in the system are from being able to perform the standards statewide.

Why "cost" the standards?

Standards provide:

- A clear and accountable measure of performance for public health agencies—a level of protection citizens can count on.
- Information to health policy makers about the operational "health" of the system as well as the effectiveness of public health interventions.
- A way to evaluate on a regular basis where public funds are needed, what they are buying, and how well they are being spent.
- By estimating what it would cost to achieve the standards statewide, the standards can be used to link state and local funding with meeting public health standards and improving health outcomes. Over time, costing the standards helps to meet the system goal of stable and sufficient funding for public health.

General assumptions used to cost the standards

- The standards are what the public health system believes that the state and every local health jurisdiction must be able to do to protect and promote the health of people. The cost of meeting the standards will not rest with the measures themselves but with the underlying capacity it takes to demonstrate performance.
- The estimates should lead to recommendations for funding priorities in public health.

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Methodology for 'Costing' the Standards

LOCAL

Develop mid-size LHJ cost estimate

- Matrix: "core" services x big ideas behind each standard, showing relationship between service and standard.
  - o April: Distribute matrix to 8 LHJs:
    - * Joint Finance-Standards Committee (Island, Jefferson, Clark, Spokane)
    - * Four LHJs near population 175,000 (Chelan-Douglas, Benton-Franklin, Whatcom, Thurston).
- LHJs estimate the number of professional FTEs (direct costs) needed to successfully meet 95% performance of the standards for a jurisdiction serving population 175,000 (the average population of all current 35 jurisdictions). This mid-size jurisdiction is the starting point and basis for costing standards at the local level. Technology may be separately estimated.
- Staff will synthesize and share FTE estimates and report exceptions.
- LHJ reps confirm and resolve remaining differences.
- Complete mid-size LHJ cost estimate by multiplying:
  - o Direct FTEs by estimated salaries;
  - o Direct FTEs by support and management ratio for span of control;
  - o All FTEs by percentage overhead factor.
- Centrally add costs for tools, training, overhead, and supporting staff (management and administration) on percentage basis and by span-of-control formula.
- **Sum: the cost for a mid-size LHJ to meet standards at 95% performance.**

IDENTIFY "CORE" ACTIVITIES

Identify the "big idea" behind each standard

- Vital services, protection, outcomes, deliverables
- Recognize a service could cut across multiple standards and vice versa.

STATE

Start with the gap

- Use "Proposed Matrix" of DOH assignments of divisional responsibility to meet the standards as a starting point**. Focus on the gap between what was measured and what it would take to improve DOH performance to 95% of standard.**
- Seek key informants to be identified by senior management team.

Scale the estimate and aggregate statewide

- Use the cost for a mid-size LHJ as the starting point and 2002 population.
- Use the four categories of local health jurisdiction types (Rural-Urban Commuting Area) outlined in the baseline evaluation to group to classify LHJs and establish relationship of each LHJ to mid-size. Multiply costs by scaling factor and aggregate costs statewide.
- Implications: LHJs with 10x population will have 10x cost; those with 0.1x the population will have that fraction of cost. Acknowledge that estimates may need to be adjusted for outliers (such as separate estimate for Public Health—Seattle & King County).
- **Sum: the cost for all LHJs to meet the standards at 95% performance.**
- Test costs by consulting LHJs that performed well in 2002. Interview them and see how they rate and would improve the estimate.

Estimate the gap

- **Use the estimate for total funds needed system-wide and subtract current resources** (2002 BARS estimate) to give the amount of additional resources needed (the "gap") to meet the standards.
- Ensure the estimate allows for flexibility to respond to public health priorities.

Estimate cost for DOH to meet standards

- Schedule individual meetings for key informants in four divisions: CFH, Epi/Lab, HSQA, and EH, to develop models for meeting the standard at the 95% level, in terms of FTEs and the major resources needed.
- Key informants review standards for all topic areas where responsibility has been assigned for their division.
- Program managers and/or key program staff review cost estimates for their division and modify.
- DOH staff estimates costs for the remaining divisions (MSD, OS, DIRM, SBOH) and applies costs to FTE estimates. **Result: Cost for DOH to meet 95% of performance.**

Total costs:

Local gap

+

State gap

=

Estimated cost to meet standards statewide

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- The estimates draw on the expertise of public health professionals from both the Finance Committee and the Standards Committee. The cost estimates incorporate the best judgment of practicing professionals, applied using real-life scenarios and costs to develop formulas. Assumptions are documented so readers can easily track how cost figures were derived.
- Estimating costs should focus on *additional* resources needed to achieve public health performance standards statewide, on top of current capacity in the system, beginning with information gathered in the 2000 field test and the 2002 baseline study. Thus, additional funds needed focus on the "gap" between current performance and the performance desired to achieve the standards.
- The estimates focus on the system as a whole; state and local needs are estimated separately, but the model is not designed to be applied in a district-specific or service-specific method.
- The cost model is based on the resources public health professionals believe it will take to meet the standards, including assumptions about known costs such as salary, benefits, rent, equipment, and vehicles.
- The model and assumptions will be used to derive reasonable estimates of overall need—but they will not represent the only way or the "right" way to organize or deploy resources. The modeling work focuses on current capacity only in terms of today's current organization of LHJs and DOH, and it did not try to figure those costs in any re-structured system. From the initial estimate, other work may be done to estimate costs using different approaches that seem to offer improved service or that promise cost savings. This effort should lead to next steps in which ways to improve our public health efforts are considered. A continued focus on quality improvement is essential—finding ways to be more effective in terms of outcomes and more efficient in terms of costs and resources.
- Core public health activities and resources needed to provide them were estimated, based on the standards, rather than the many categorical programs that help support basic capacity. These differences are drawn because separating core from categorical activities will reveal the real cost of resources that must be in place to assure baseline public health protection.

Costing methodology: DOH

- At DOH, the process to develop costs was sponsored and led by the senior management team and managers from across the department. Costing was based on full-time equivalent (FTE) estimates and used formula calculations for each division to calculate the total costs, which includes indirect or overhead costs, supervision and administrative support.
- These cost estimates were conducted as a separate and parallel process from the costing work done with LHJs, and they do not reflect anticipated state capacity that would be needed once LHJs are fully funded. The DOH estimates were based on the size and capacity that exists within local health at this time. A next step for DOH would be to use the local health estimates as information to re-examine the state estimates.
- Given the expectations for delivery of local public health services throughout the state and current under-funding, it would be expected that the estimates for local health would be far greater than for the state.
- From the baseline assessment, a "proposed matrix" of DOH assignments of responsibility (by standards) was refined, and DOH focused on the gap between what was measured and what it would take to improve performance in those specific areas already identified on the matrix—not

on all areas where the standards could be used.

- Program managers were encouraged to think beyond the minimum level of performance and estimate the FTE needed for a very good program.
- The process focused on FTEs and asked managers to think into the future and develop the most realistic estimate they could. The costs were calculated at the standard level and used a formula to apply costs to the new FTEs needed and add in any other extraordinary cost.
- Assumptions about making the cost estimates:
  - Cost estimates are based on the number of new professional staff and any extraordinary costs (e.g., technical equipment, software, etc.) needed to meet the standards at 95% performance. Excluded were all administrative support staff. A consistent formula specific for each division calculated the associated costs (support and supervisory staff) and overhead.
  - The estimates of current FTEs were based on what are expected to be in place by June 6, 2005. New FTE will assume a start date of July 1, 2005. Economies of scale will be addressed through management review. The timeframe for reaching 95% performance on the standards could be phased in over five years, with a midpoint assessment (in 2007) to determine progress toward goals and adjust calculations as necessary.
  - Estimates are at the standards level and not at the measure level.
  - For programs that currently receive grant funding that may not be ongoing but that allows them to accomplish the work, estimates include the number of FTEs needed to continue the work if the grant went away. These are grants that have a good chance of being discontinued.
- Given that the DOH Administrative Standards have not been finalized, they were not included in the DOH estimates.
- Detailed FTE information is not included in final reports.

Costing methodology: local public health

- Assumptions and guidance for cost estimation was provided by a six-member group of representative LHJs from the following counties: Benton-Franklin, Clark, Island, Spokane, Thurston, and Whatcom. The estimate was calculated by Berk & Associates.
- Important public health protection and activities for each standard were selected for costing, using a matrix of services. Members of the subgroup related the matrix to the standards and estimated the total number of professional FTEs needed to carry out the activity in a jurisdiction with a population of 175,000.
- Local estimates were calculated by topic area of the standard, then aggregated by topic for the five areas. Not every standard must have a cost assigned, though most will. Cost per measure was not estimated and public health professionals believed it would be a misrepresentation to do so.
- A span of control factor was applied to each direct service FTE to estimate support and management FTE, and an index of the cost of a mid-size LHJ to meet the standards was set ($17.5 million)
- Next, local cost estimates were scaled for size, to take into account different costs for rural or urban areas. (Example: rural areas have greater travel time and fewer appointments per day. Urban areas may have concentrated populations, but also much higher demands for service.) For this model, we adapted a calculation used in the baseline study called the Rural-Urban Commuting Area system. At this point it was decided that the scaling resulted in an

unrealistic result for Seattle-King County, and it would be estimated separately. The remaining LHJs fell into six size categories.

- Using the estimate of the total amount it would take to reach the standards, subtracted from that was the amount of funding already committed to meeting the public health standards. The result is the shortfall in LHJs to be able to fully meet the public health standards ("the gap").
- The model to cost the standards seems to work relatively well, except for cases of very small and very large local health departments; therefore, an adjustment to the estimate was developed for Public Health—Seattle & King County (PHSKC) because the model resulted in a very low total estimate for this jurisdiction to meet the standards. In addition, the estimate recognizes other ways to describe capacity, such as investments in contracts with community health, research, investments in partnering with the private health care industry, and developing automated records.
- All the divisions of PHSKC participated in a costing methodology similar to local health departments to estimate the cost to meet the standards for a large metropolitan health department. The agency considered areas in 2002 baseline performance that needed improvement, plus all activities that it engaged in to meet the standards.